

**Literature Review of Phosphorus Export Rates and
Best Management Practices
LaPlatte River Watershed Project**

**Prepared by
Anthony Artuso, University of Charleston
Stone Environmental, Inc.
and William Walker**

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Summary of Estimated Phosphorus Export Rates, BMP Costs and Effectiveness

The estimated phosphorus loadings by land use category as well as BMP effectiveness and cost estimates are summarized in Table 1. The mean phosphorus export rates shown in the table are the average of values reported in monitoring studies and literature reviews evaluated for this report. The probable ranges were derived by computing a 95% confidence interval for these mean values.

Table 1 Summary of Phosphorus Export Rates

Land Use	Total P Export (kg/ha)		Total P Export (mg/l)	
	Mean	Prob. Range	Mean	Prob. Range
Dairy barnyard	N/A	N/A	20	N/A
Dairy milkhouse	N/A	N/A	81.5	N/A
Manured row crops	4.9	2.7 - 7.1	N/A	NA
Manured row crops -surface	N/A	N/A	2.6	0.54 - 5.6
Manured row crops -subsurface	N/A	N/A	0.38	0.07 - 0.7
Manured pasture/hay	5.5	2.5 - 8.5	N/A	N/A
Manured past./hay -surface	N/A	N/A	3.5	0.5 - 6.2
Unmanured pasture/hay	0.34	0.23 - 0.44	N/A	N/A
Unman. pasture/hay - surface	N/A	N/A	0.59	0.31 - 0.86
Conv. till row crops	5.2	3.9 - 6.5	N/A	N/A
Conv. till row crops - surface	N/A	N/A	1.5	0.7 - 2.3
Conv. till row crops - subsurface	N/A	N/A	0.04	0.02 - 0.1
Urban - residential	0.82	0.55 - 1.1	N/A	N/A
Urban - resid.- surface	N/A	N/A	0.39	0.26 - 0.42
Urban - comm./ind.	1.9	1.5 - 2.3	N/A	N/A
Urban - comm./ind. - surf.	N/A	N/A	0.26	0.16 - 0.36
Urban - highways	N/A	N/A	0.315	0.25 - 0.375
Forest	0.15	0.09 - 0.21	0.025	0.014 - 0.036